



**INFORMATION TECHNOLOGY INDUSTRY COUNCIL**

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**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY**

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
Room 222  
1919 M Street, N.W.  
Washington, D.C. 20554

Re: In the Matter of Advanced Television Systems and Their Impact Upon  
the Existing Television Broadcast Service; MM Docket No. 87-268.

Dear Mr. Caton:

I am enclosing an original and ten copies of comments by the Information  
Technology Industry Council (ITI) in response to MM Docket No. 87-268, the  
Fifth Further Notice of Proposed Rule Making on Advanced Television.

Sincerely,

Fiona Branton  
Director, Government Relations and Regulatory Counsel, ITI

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*The association of leading IT companies*

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY  
MM Docket No. 87-268

FIFTH FURTHER NOTICE OF PROPOSED RULE MAKING

**COMMENTS OF THE  
INFORMATION TECHNOLOGY INDUSTRY COUNCIL**

The Information Technology Industry Council (ITI)<sup>1</sup> hereby files these comments in response to the Fifth Further Notice of Proposed Rulemaking (NPRM) in the above-captioned proceeding.

Introduction And Summary

ITI welcomes the Commission's issuance of the Notice, and the accompanying opportunity to address the Commission on the proposed digital television broadcast standard. As suppliers of information technology, and ultimately, as users of the information superhighway, ITI member companies have a large stake in the development and success of the National Information Infrastructure (NII) and Global Information Infrastructure (GII). ITI believes that Advanced Television (ATV) will play an important role in the NII by providing a digital transmission medium for consumers and information providers. ITI's members are developing and deploying new services and products that will bring to homes, businesses, and schools new information, education, entertainment, business, and communications capabilities. Digital television technologies will provide an important means of delivering these new applications to consumers. ITI therefore believes the transmission standard that has been proposed to the Commission by the Advisory Committee on Advanced Television (ACATS) will be an important part of a diverse and flexible NII. ITI urges the Commission to promptly adopt and implement a standard for ATV along with policies that will encourage the use of digital broadcast technologies to stimulate the development and deployment of innovative and beneficial NII applications.

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<sup>1</sup> ITI, formerly known as the Computer and Business Equipment Manufacturers Association (CBEMA), is a leading trade association of manufacturers and vendors of computers, computing devices, office equipment, and information services.

## I. The ATV Standard and Progressive Scan

The NPRM proposes adopting the ATSC DTV standard, which is described in the NPRM,<sup>2</sup> and requiring "the use by digital television licensees of each element of the ATSC DTV Standard."<sup>3</sup>

If ATV is to be an integral part of the NII and GII, it must be fully interoperable with computer and information technology. The proposed ATSC DTV standard contains transmission formats using both interlace and progressive scan techniques. The information technology industry uses progressive scan in virtually all of its monitors. The reason is simple: progressive scan is necessary to display text and images in a fashion that does not irritate the viewer. Interlace scanning, on the other hand, creates flickering and motion artifacts that are noticeable at close viewing distances, rendering interlace scan undesirable for computer and imaging applications. Progressive scan also produces a better video picture than an interlace scan monitor of the same number of lines. Indeed, early reports of the proposed ATV standard indicate that a 720 line progressively scanned picture is of similar quality to a 1080 line interlace-scanned picture.

In 1993, ITI and other information technology associations advised ACATS of the importance of an all-progressive scan ATV system for computer compatibility. The ACATS responded by including both progressive scan and interlace formats in the proposed standard.<sup>4</sup> However, ITI believes that a truly interoperable ATV system will require the exclusive use of progressive scan. Accordingly, ITI believes that the Commission should establish an ATV transmission standard based on an all-progressive system so that when broadcasters begin using the spectrum specifically allocated for digital television, they would use only progressive scanning formats. Of course, during the transition to a digital system, broadcasters may continue to use interlace on their current NTSC channels.

ITI recognizes the current investment in interlace and the painstaking process that the Grand Alliance and ACATS have undertaken to produce an ATV standard.<sup>5</sup> Nevertheless, ITI believes that ATV must be designed for the future. Including interlace in the ATV standard will perpetuate inferior technology and delay the convergence of technologies.

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<sup>2</sup> NPRM at 8 - 20.

<sup>3</sup> NPRM at 37.

<sup>4</sup> Three of four of the HDTV formats and seven of the ten SDTV formats use progressive scan.

<sup>5</sup> Any transition to new technology involves additional investment. Broadcasters will have to invest in new equipment to implement ATV regardless of whether it includes interlace. ITI believes that the cost of investment in new digital technologies can be minimized by going directly to an all-progressive system.

## II. Receiver Standards

ITI strongly endorses the principles of interoperability, flexibility, and extensibility in the selection of advanced digital television standards, with the objective of building an information infrastructure that best integrates television and computer technologies. The use of progressive scan transmission formats will best enable this integration. If the Commission chooses to include interlace scanning formats in the transmission standard, it is essential that advanced television receivers be designed to receive both interlace and progressive scan transmissions. This is consistent with the principle established in the All Channel Receiver Act,<sup>6</sup> which was enacted in 1962, and authorizes the Commission to require that television receivers be capable of adequately receiving all frequencies allocated to television broadcasting. This served the public interest by ensuring that consumers who purchased televisions were able to receive all programs broadcast. ITI believes that adopting a similar requirement for the transition from NTSC to ATV will help ensure an evolution to a digital, all-progressive television system that reduces the risk of consumers being left with obsolete technology. While market demand will likely drive manufacturers to offer television receivers that receive all of the digital broadcast formats, ITI believes it is in the interest of both the public and the information technology industry to ensure a smooth and rapid transition to an ATV system by requiring that televisions receive all transmission formats.

In developing regulations regarding the ability of televisions to receive all ATV signals, the Commission should endeavor to develop regulations that are flexible enough to evolve with technology and with changing broadcast transmission formats.

While a requirement to receive all formats will benefit purchasers of digital television sets, ITI believes it is not necessary to require that television receivers display all formats in "high definition" quality and screen size. Decisions about how to display the signals that are received should be left to the marketplace in order to ensure optimal consumer choice.

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<sup>6</sup> 47 U.S.C. 303(s).

### Conclusion

As new NII services and products are developed that take advantage of new computing and communications technologies, including digital television, the Commission should adopt policies that promote consumer choice, equipment compatibility, and the ability to take advantage of new and emerging technologies. Policies implemented at this early stage of digital television's development must be flexible to allow their evolution with technological advancement and to meet changing consumer needs.

Respectfully submitted,  
Information Technology Industry Council

By: Fiona J. Branton

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Dated: July 11, 1996